

## PLUG AND ABANDONMENT PROCEDURE

### Vonasek Alvin GU B True #1

1. Note: Production Casing = 5-1/2" OD, 15.5-17#/ft.; Production Hole Drilled @ 7 7/8."
2. Provide 48 hr notice to COGCC prior to rig up per request on approved Form 6 (e.g. call field coordinator, submit Form 42, etc.). Call IOC (970-506-5980) at least 24 hr prior to rig move. Request they isolate production equipment and remove any automation prior to rig MIRU.
3. Prepare location for base beam equipped rig.
4. Check and record Bradenhead pressure. If Bradenhead valve is not accessible, re-plumb so that valve is above GL.
5. MIRU, kill as necessary using clean fresh water with biocide and circulate. ND WH. NU BOP. Unseat landing jt, LD.
6. Notify cementers to be on call. Provide volumes listed below:
  - 6.1 SX Balanced Plug: 92 cu ft/ 80 sx class "G" w/0.25 pps cello flake, 0.4% CD-32, 0.4% ASA-301 mixed at 15.8 ppg and 1.15 cf/sx (610' inside 5-1/2" casing, no excess).
  - 6.2 Stub Plug: 545 cu ft/410 sx Type III CaCl<sub>2</sub> cement w/0.25 pps cello flake mixed at 14.8 ppg and 1.33 cf/sx (100' in 5-1/2" production casing, 453' inside 11" OH + 40%, and 207' inside 9-5/8" surface casing).
7. Pressure test CIBP to 1000 psi.
8. PUH to 4900' w/ 2-3/8" tubing.
9. RU Cementers. Pump SX Plug: 92 cu ft/ 80 sx class "G" w/0.25 pps cello flake, 0.4% CD-32, 0.4% ASA-301 mixed at 15.8 ppg and 1.15 cf/sx to place cement from 4900' – 4290'.
10. PUH to 1430'. Circulate 45 bbls water containing biocide to clear tubing. Then, TOO H.
11. MIRU WL. Shoot off casing at 1330'. RDMO WL. Circulate water containing biocide to remove any gas.
12. NDBOP, NDTH.
13. Install BOP on casing head with 5-1/2" pipe rams.
14. TOO H with 5-1/2" casing, LD.
15. RIH with 2-3/8" tubing to 1430'.
16. RU Cementers. Pump 10 bbl SAPP with a minimum of 20 bbl fresh water spacer. Spot Stub Plug: 545 cu ft/ 410 sx Type III CaCl<sub>2</sub> cement w/0.25 pps cello flake mixed at 14.8 ppg and 1.33 cf/sx from 1430' to 670'.
17. PUH to 100' and circulate 5 bbls water containing biocide to clear tubing and cement.
18. TOO H. WOC 4 hrs. Tag Cement. Cement top needs to be above 670'; Proceed assuming TOC is at 670'. Otherwise, call production engineer.
19. MIRU WL. RIH 9-5/8" CIBP to 80'. Set, PT to 1000 psi for 15 min. If tests, RDMO WL and WO rig.
20. Instruct cementing and wireline contractors to e-mail copies of all job logs/job summaries and invoices to rscDJVendors@anadarko.com within 24 hrs of the completion of the job.
21. Supervisor submit paper copies of all invoices, logs, and reports to Joleen Kramer.
22. Excavation crew to notify One Call to clear excavation area around wellhead and for flowlines.
23. Excavate hole around surface casing enough to allow welder to cut 8 5/8" casing minimum 5' below ground level.
24. Welder cut 8 5/8" casing minimum 5' below ground level.

25. MIRU ready cement mixer. Use 4500 psi compressive strength cement, (NO gravel) fill stubout.
26. Spot weld on steel marker plate. Marker should contain Well name, Well number, legal location (1/4 1/4 descriptor) and API number.
27. Obtain GPS location data as per COGCC Rule 215 and send to rscDJVendors@anadarko.com.
28. Properly abandon flowlines per Rule 1103.
29. Back fill hole with fill. Clean location, level.
30. Submit Form 6 to COGCC ensuring to provide 'As performed' WBD identifying operations completed. File electronic Form 42 once abandonment complete.